DOCUMENT RESUME

ED 112 197 CE 005 215

AUTHOR	Richardson, William B.; McFadden, Joan R.
TITLE	An Identification of Employment Patterns of Vocational Graduates of Indiana Secondary Schools. Final Report.
INSTITUTION	Purdue Univ., Lafayette, Ind. Dept. of Education.
SPONS AGENCY	Indiana State Dept. of Public Instruction, Indianapolis. Div. of Vocational Education.
REPORT NO	VT-102-146
PUB DATE	Jan 75
NOTE	42p.; For related document, see CE 005 214
EDRS PRICE	MF-$0.76 HC-$1.95 Plus Postage
DESCRIPTORS	Correlation; Educational Programs; *Employment Patterns; Followup Studies; *Graduate Surveys; High School Graduates; Relevance (Education); Secondary Education; *State Programs; Tables (Data); *Vocational Education; *Vocational Followup
IDENTIFIERS	Indiana

ABSTRACT

The objectives of the study were to determine the correlation between the factors of employment patterns and vocational program types for 1972-73 graduates of secondary vocational programs in Indiana. A random sample of 25 schools and graduates stratified for vocational program types (agriculture, business education, distributive education, health occupations, home economics education, and trade and industrial education) comprised the population. Findings are detailed in narrative and tabular form. A majority of the 1,000 vocational graduates sampled did seek employment and a majority worked in occupations at least somewhat related to their vocational training. The only significant differences between job relatedness and mean salary levels were found for the six months' earnings figures in the distribution education program. The relation between job relatedness and earnings was not found to be significant for one year earnings. The study did not support the premise that graduates who worked in an occupation related to their vocational training would earn more than those working in nonrelated occupations. Appended are: correspondence, the survey instrument, an analysis of nonrespondents, and other project-related information. (MF)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED112197

FINAL REPORT

AN IDENTIFICATION OF EMPLOYMENT PATTERNS OF VOCATIONAL GRADUATES OF INDIANA SECONDARY SCHOOLS

by

William B. Richardson
Joan R. McFadden

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Department of Education
Purdue University
Lafayette, Indiana 47907

January 1975

Inidana State Department of Public Instruction

Division of Vocational Education

CE 005 215

(VT 102 146)

2/3

TABLE OF CONTENTS

ACKNOWLEDGEMENT i

ABSTRACT ii

LIST OF TABLES iv

INTRODUCTION 1

Background 1
The Problem and Objectives 2
Methodology 2

FINDINGS 4

Employment Patterns 4
Full-Time and Part-Time Employment
Activities Other Than Employment
Number of Full-Time Jobs
Movement Into Labor Market
Job Relatedness 7
All Vocational Graduates
By Program Area
Vocational Training 9
Training Satisfaction
Additional Training
Work Experience 10
Cooperative Training
Part-Time Jobs
Earning Patterns 10
Earnings
Earnings and Job Relatedness

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 13

Summary 13
Conclusions 15
Recommendations 16

REFERENCES 17

APPENDICES

Appendix A. 18
Appendix B. 20
Appendix C. 28
Appendix D. 30

ACKNOWLEDGEMENTS

Special consideration is recognized in behalf of Ms. Phyllis Smith and Mr. Jerry Peters who served as research assistants on the project. The diligent work of these individuals facilitated the completion of this study. Their contribution was greatly appreciated.

The efforts of the officials of the schools who participated in this study are acknowledged and greatly appreciated. Without their cooperation this study could not have been completed.

The investigators wish to express their appreciation to Mr. Henry Cox, 1973-74 President of the Indiana Public Schools Superintendents Association, for his endorsement of the study. In like manner, grateful thanks is extended to the advisory committee who reviewed the study and worked with the research team in assuring that the study was conducted properly.

The State Department of Public Instruction, Division of Vocational Education, is acknowledged for supporting the research and making their records available. Especially, Mr. Orville Scribner who spent considerable time with the investigators in interpreting these records.

Finally, the work of Bonnie (Myers) Dobbins was greatly appreciated in her capacity as a Project secretary.

- earnings were examined the variation was from $3.46 per hour to a low of $2.18 per hour. When one year earnings were analyzed the range was a high of $3.45 per hour to a low of $2.33 per hour. (8) A beginning earnings analysis did not reveal significant differences when job relatedness and mean salary levels are compared. When six months earnings were analyzed significant differences were found only in the Distributive Education program area and for the total when all graduates irrespective of program type were compared. When one year earnings were analyzed there were no significant differences found.

List of Tables

Table		Page
1.	Random Stratification of the Study Sample and Associated Rates of Return	3
2.	Percentage of 1972-1973 Vocational Graduates Who Sought Full and Part-Time Employment Upon Completion of a Vocational Program	4
3.	Reasons Why the Vocational Graduates Did Not Seek Full-Time or Part-Time Employment Upon Graduation	5
4.	Number of Full-Time Jobs and Months Before First Full-Time Jobs of 1972-1973 Indiana High School Vocational Graduates	6
5.	Average Number of Months Before First Full-Time Job Taken	7
6.	Job Relatedness of 1972-1973 Indiana High School Graduates When Examined as to Varying Periods of Employment	8
7.	Job Relatedness of Employment Periods of 1972-1973 Indiana Vocational Graduates	8
8.	Percentages of Graduates Who Were Satisfied With Their Vocational Training and Those Who Had Obtained Additional Job Training After High School	9
9.	Percentages of Graduates Who Were Enrolled in Cooperative Programs and/or Held Part-Time Jobs While in High School.	10
10.	Earnings of Vocational Graduates by Vocational Program Area	11
11.	Mean Initial Salary Levels by Job Relatedness of Initial Employment for Comprehensive High School Graduates by Vocational Program Area	12
12.	Mean Salary Levels by Job Relatedness at Six Months Employment for Comprehensive High School Graduates by Vocational Program Area	12
13.	Mean Salary Levels by Job Relatedness at One Year	13

INTRODUCTION

Background

In our society the goals of education are designed to serve not only the needs of the individual but also the needs of the community in which they live. Occupational education is expected to make an important contribution to each of these goals.

The Vocational Education Act of 1963 and the Vocational Education Amendments of 1968 have mandated the evaluation of vocational program effectiveness. With current emphasis on accountability, it is crucial that the successes of the vocational programs in the state be identified.

Tomlinson (1972) in the 1972 AVA Yearbook discussed the following portion of the Vocational Amendments of 1968: "programs must be 'of high quality' and 'realistic in the light of actual or anticipated opportunities for gainful employment'." He stated:

> This provision requires that there must be a close but flexible relationship between education programs and the labor force. Emphasis has been given to this purpose in the directives to the State and National Advisory Councils in which they are charged with responsibility to evaluate the State Plan and other planning documents in light of "needs". Serious questions have been raised both as to the past quality of instruction and the appropriateness of programs offered.

A part of accountability urged by the Vocational Education Acts includes accessible training opportunities in relation to anticipated employment needs. Burkett (1972) emphasized that "access" is a key word in this intent:

> The act's overall purpose is that of providing vocational education opportunities so that all persons will have ready access to vocational training or retraining which is of high quality, which is realistic in light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.

The statements of both Tomlinson (1972) and Burkett (1972) stress the need for vocational programs in relation to the employment opportunities available. One way to evaluate this is to study the employment patterns of graduates of the vocational programs. It is imperative that research concerning patterns of vocational graduates be conducted in Indiana to provide data to assist those responsible for making decisions regarding the types and numbers of programs that are to be continued and/or developed in the state. Research conducted in other states may serve as a pattern but the data can be applied only in the state in which it was obtained. Since current data was inconclusive in Indiana, this was considered a project of some urgency.

The selection of the sample, as described later in this proposal, was made in such a way that it provided data concerning all vocational areas. This data is generalizable to the entire state. The research provided not only employment patterns but it also identified relationships that existed between these patterns and the type of vocational program for which the employee graduated.

The Problem and Objectives

The purpose of this study was to identify the employment patterns of graduates of secondary vocational programs in Indiana.

The objectives of this study were:

1. To identify the first job taken of graduates of secondary vocational programs and determine if it was related to the individual's vocational training.

2. To identify the type of employment six months after the completion of the vocational program and the relationship of this employment to the vocational training.

3. To identify the type of employment one year after the completion of a vocational training program and the relationship of this employment to the vocational training.

4. To identify the starting salary and the patterns and amounts of raises.

5. To compare the salaries of those employed in the area for which they were trained with salaries of those employed in an area other than the one in which they were trained.

6. To determine the correlation between factors of the employment pattern and vocational program type.

Methodology

There were 25 comprehensive high schools and 5 area vocational schools selected for the study. To be eligible for the study a school must have offered three vocational program areas during the 1972-73 school year. The State Department of Public Instruction Vocational Division records were utilized to verify this restriction.

Each school was visited by the investigator to obtain the names, addresses, and other basic descriptive data relative to the vocational graduates. A total of 2,909 graduates of the comprehensive high schools was identified from which 1,000 were selected by a stratified random procedure to insure distribution representative of the total population. A 68 percent return rate was obtained. Table 1 presents structure of the stratified sample.

Table 1. Random Stratification of the Study Sample and Associated Rates of Return

Program Area	Random Sample (N)	Random Sample %	Usable Return (N)	Usable Return %
Agriculture	61	6.1	50	82
Business Education	331	33.1	246	74
Distributive Education	190	19.0	134	71
Health Occupations	26	2.6	16	62
Home Economics	41	4.1	28	68
Trade and Industrial	351	35.1	206	59
TOTAL	1000	100%	680	68%

The area school graduates were selected by techniques similar to the comprehensive school. The return rate was less, representing a 50 percent rate. The usable sample was 109 cases.

A list of all cooperating schools is found in Appendix A.

A follow-up instrument was developed and field tested. The instrument with appropriate letters was mailed to each graduate identified. A post card follow-up was mailed after two weeks. A second instrument was sent after four weeks, and a second post card after six weeks. A third instrument was mailed after eight weeks. (See Appendix B)

An Advisory Committee monitored the project. A listing of their names is found in Appendix C.

A five percent stratified sample of non-respondents was interviewed by telephone. An analysis of their responses to the questionnaire is presented in Appendix D.

FINDINGS

The findings will be reported and discussed in four sections: (1) Employment Patterns, (2) Job Relatedness, (3) Adequacy of Vocational Preparation, and (4) Earning Patterns.

Employment Patterns

In order to identify the employment patterns it was deemed necessary to determine several related factors. These will be reported and discussed in this section in the following order: (1) Full-Time and Part-Time Employment, (2) Activities Other than Employment, (3) Number of Full-Time Jobs, and (4) Months Before First Full-Time Job.

Full-Time and Part-Time Employment

Comprehensive High Schools. Table 2 contains the percentages of the 1972-73 Comprehensive High School vocational graduates who sought employment, both full-time and part-time, by program area.

Table 2. Percentage of 1972-73 Vocational Graduates Who Sought Full and Part-Time Employment Upon Completion of a Vocational Program

Program Area	Percent Sought Full-Time Jobs	Percent Sought Part-Time Jobs
Agriculture	74	18
Business	74	18
Distributive	78	21
Health	69	44
Home Economics	50	32
Industrial	76	18

The percentage of graduates in each vocational program area seeking full-time employment clusters in the 50 to 80 percent range with Distributive at 78 percent, the highest point on the continuum, and Home Economics at 50 percent, the lowest percentage on this continuum.

The percentage of graduates in each vocational program seeking part-time employment ranged from 18 percent to 44 percent. Health occupation graduates reported that 44 percent sought part-time employment, the highest percentage reported, while three program areas: Agriculture, Business, and Trade and Industrial reported the lowest, 18 percent.

Area Vocational Schools. The percentage of area vocational graduates who sought full-time jobs cluster in the 61 to 100 percent range with Agriculture at the 100 percent point and Health at 61 percent. This is a higher cluster than that for comprehensive high school graduates.

The percentages of graduates seeking part-time employment cluster in the 17-33 percent range, as compared with comprehensive high school range of 18-44 percent. Agriculture had the smallest percentage of graduates seeking part-time employment at 17 percent while Distributive graduates had the highest at 33 percent. Seventy-two percent of all area vocational school graduates sought full-time employment.

While the questions regarding full-time and part-time employment were not written in such a way as to obtain mutually exclusive answers (ones that could be summed) it is apparent that a high percentage of vocational graduates in Indiana did seek employment.

Activities Other Than Employment

Comprehensive High School. If over 70 percent of the 1972-73 vocational graduates in Indiana sought full-time and/or part-time employment, what did the other graduates do? Table 3 indicates that 19 percent of the graduates who did not seek full-time employment expected to enter another school. However, the other categories did not provide much help in identifying why these graduates did not seek full-time employment. Plans for marriage, military expectations and part-time employment collectively accounted for only six percent of the response.

Table 3. Reasons Why the Vocational Graduates Did Not Seek Full-Time or Part-Time Employment Upon Graduation.

Reason	Full-Time (Percent)	Part-Time (Percent)
Expected to enter another school	19	14
Housewife	03	02
Handicap or disability	00.3	00.6
Not interested in a job	00	00.4
Military	02	02
Part-Time	01	—
Unable to find full-time	—	05

A similar response pattern existed for the part-time employment response for 14 percent reported they expected to enter another school. The other possible responses accounted for less than 10 percent of the total response.

Area Vocational Schools. The reasons for not seeking full-time employment from Area Vocational Schools were more helpful than the responses from Comprehensive High School in determining why the graduates did not seek employment. 12 percent of the graduates who did not seek full-time employment expected to enter another school. The other six reasons accounted for another 12 percent. With 72 percent seeking full-time employment this accounts for 96 percent of the graduates.

Number of Full-Time Jobs

Comprehensive High Schools. To determine if the graduates who sought employment were able to find it, and to determine the movement of the graduates through the labor market, each graduate was asked to identify the number of full-time jobs he had held since graduation. These data are summarized in Table 4. It should be noted that for the 1972 graduates, the time since graduation was as much as 24 months, while for the 1973 graduates it was as much as 12 months.

These data reveal that students in most of the vocational areas had held one full-time job. Two exceptions to this observation appear: 1) one is in the health area where equal percentages had held two jobs as had held one job; and 2) a slightly larger percentage of graduates of the home economics area had held no full-time job.

The range of percentages of students who held two full-time jobs was from 14 to 39 percent. While there was a sharp decline in the number of students who had held three to five full-time jobs, the highest percentages in this category were from the vocational areas of Industrial and Vocational Agriculture. No graduates indicated they had held more than five full-time jobs.

Area School Graduates. The number of full-time jobs held by area vocational graduates followed the same patterns as comprehensive high school graduates with three exceptions: 1) a larger percentage of graduates in Agriculture had held two jobs than had held 0, 1, or 3-5 jobs, 2) in the health area, there was only a small difference in the percentage which had held no jobs (39 percent) and the percentage which had held one job (43 percent), 3) where 39 percent of the comprehensive high school Home Economics graduates had held no full-time jobs only 13 percent of the area vocational school graduates had held no full-time jobs.

Table 4. Number of Full-Time Jobs of 1972-73 Indiana High School Vocational Graduates

Program Area	Number of Full-Time Jobs			
	0	1	2	3-5
	(Percent)			
Agriculture	16	50	22	10
Business	20	51	20	7
Distributive	15	48	30	5
Health	19	38	38	6
Home Economics	39	36	14	0
Industrial	16	44	24	12

Movement Into Labor Market

Comprehensive High School. Table 5 contains information regarding the length of time in months after graduation before the first full-time job. For those who had at least one full-time job, the maximum average time by vocational program area was 2.26 months until the first full-time job. The Health Occupation area moved into the labor market in less than one month whereas the Distributive Education graduates moved into the labor market in two to three months.

Table 5. Average Number of Months Before First Full-Time Job Taken.

Program Area	Average Number of Months Before 1st Full-Time Job
Agriculture	1.72
Business	2.21
Distributive	2.26
Health	.88
Home Economics	1.46
Industrial	1.82

Area Vocational School. Two differences showed up with Area Vocational School graduates: 1) Agriculture graduates took only 0.83 months to enter the job market and, 2) Health graduates took a full 2 months to enter the labor market.

Job Relatedness

To determine if the vocational graduates were employed in the occupation for which they had been trained the graduates were asked to indicate if they were employed: (a) in the occupation for which they were trained or a related occupation, or (b) in a non-related occupation. They were asked these questions regarding job relatedness pursuant to their employment at three different times: (1) their initial employment, (2) their employment six-months after graduation and (3) their employment one year after they completed the vocational program.

Job Relatedness - All Vocational Graduates.

Comprehensive High School. An examination of Table 6 reveals that a larger proportion of graduates were employed in a related occupation than in non-related occupations. Initially, sixty percent of the employed graduates were working in related occupations. At six months, fifty-nine percent were in that category, whereas fifty-four percent were employed in related occupations at one year.

Table 6. Job Relatedness of 1972-73 Indiana High School Graduates When Examined as to Varying Periods of Employment

Relatedness	Initial (Percent)	Six Months (Percent)	One Year (Percent)
Related	60	59	54
Not Related	40	41	46

Area Vocational Schools. The results for area vocational schools were reversed, with a higher percentage of graduates going into non-related jobs. This percentage increased slightly at six months and one year.

Job Relatedness - By Program Area

Comprehensive High School. Table 7 reports the percentages of graduates who indicated their first full-time job was in the occupation for which they were trained or in a related occupation. These percentages are presented by vocational program areas. The resulting percentages range from 42 percent for Home Economics to 70 percent for Business Education.

An analysis of Table 7 reveals the percentage of those graduates who were employed six months after graduation and whether they were employed in a related occupation. (The average for all cases was 59 percent for those employed in the occupation for which they were trained with Health graduates highest and Trade and Industrial the lowest at 75 and 49 percent respectively.)

Table 7. Job Relatedness of Employment Periods of 1972 and 1973 Indiana Vocational Graduates

Program Area	Initial (Percent)	Six Months (Percent)	One Year (Percent)
Agriculture	53	59	53
Business	70	71	69
Distributive	56	57	45
Health	67	75	*
Home Economics	42	50	*
Industrial	50	49	48

*Too few cases to compute

In like manner, a review of Table 7 illustrates similar results in that after one year 54 percent of the graduates were working in at least a related occupation. Business had the highest job relatedness percentages and Distributive Education graduates the lowest. Two areas, Health and Home Economics, had fewer than 10 cases at one year, therefore computation were not made in these two areas.

Area Vocational Schools. While the percentages in any one area for comprehensive high school did not fluctuate greatly, the percentages did for area vocational schools. Initially, 48 percent of Business graduates were working in related areas while at the one year level, only 20 percent were working in a related area. For the health graduates the percentages were different, going from 54 percent initially to 45 percent at six months and on up to 67 percent at one year.

Vocational Training

Training Satisfaction and Additional Training

Comprehensive High School. Each student was asked if he was satisfied with his vocational training. Table 3 presents summaries of their answers by program area. The percentages ranged from a high of 87 percent in Agriculture to a low of 75 percent in Home Economics. It seems plausible that a large proportion of the graduates were satisfied with their vocational training.

Table 8. Percentages of Graduates Who Were Satisfied With Their Vocational Training and Those Who Had Obtained Additional Job Training After High School

Program Area	Satisfied With Vocational Training (Percent)	Additional Training
Agriculture	87	17
Business	85	16
Distributive	78	14
Health	78	33
Home Economics	75	17
Industrial	79	24

Table 8 also provides a summary of the percentages of the vocational graduates who reported that they had received additional job training after graduating. Thirty-three percent of the Health Occupations graduates reported that they received additional training while only 14 of the Distributive Education people reported receiving additional training.

Area Vocational Schools. Graduates also seemed satisfied with their training. The percentages ranged from a high of 91 percent in Health and Industry to 67 percent in Distributive. Only 22 percent of the Health graduates sought additional training while none of the Distributive graduates did.

Work Experience

Cooperative Training and Part-Time Jobs.

Comprehensive High School. A matter of importance relates to the work experience of the graduate. Two questions were asked in reference to this area. Each student was asked if he was involved in cooperative training. Eighty-nine percent of the Health graduates reported yes to this question while 37 percent of the Agriculture graduates reported yes. These were the high and low respectively. It is evident that a considerable percentage of the graduates were involved in cooperative training.

Each student was asked if he had a part-time job while in high school. Forty-seven percent of the Industrial graduates and 20 percent of the Distributive reported yes to this question. These percentages represent the high and low response rates respectively.

Area Vocational Schools. Twenty-nine percent of the Area Vocational School graduates had cooperative training, with Distributive the highest at 75 percent. Agriculture was lowest with only 17 percent. Forty-six percent of Area Vocational School graduates had part-time jobs with Agriculture the highest at 67 percent and Distributive the lowest at 25 percent.

Table 9. Percentages of Graduates Who Were Enrolled in Cooperative Programs and/or Held Part-Time Jobs While in High School.

Program Area	Cooperative Training (Percent)	Employed in Part-Time Job (Percent)
Agriculture	37	43
Business	45	29
Distributive	80	20
Health	89	22
Home Economics	42	25
Industrial	45	47

Earning Patterns

While some who returned the questionnaire failed to indicate their salary, the questionnaires that reported salaries for the time corresponding to initial employment, employment at six months after graduation, and at the time the questionnaires were completed, were used in the review of earning patterns. These data are reported in Table 10.

Table 10. Earnings of Vocational Graduates by Vocational Program Area.

Program Area	Beginning Earnings (Dollars/Hr)	Earnings After Six Months (Dollars/Hr)	Present Earnings (Dollars/Hr)
Agriculture	3.04	3.46	3.31
Business	2.24	2.36	2.51
Distributive	2.51	2.62	2.72
Health	2.14	2.18	2.33
Home Economics	2.49	2.68	2.49
Industrial	2.89	3.15	3.45

Earnings

Comprehensive High School. Table 10 reveals that initial earnings ranged from $2.14 to $3.04 per hour with a difference of $ .90 between the low and the high. Health occupations reported the lowest initial salary with Agriculture reporting the highest.

Six months after graduation, earnings reported ranged from $2.18 to $3.46 with a difference of $1.28 between the high and low. Again Health Occupations reported the lowest salary and Agriculture the highest following the same pattern as that established by the initial salaries.

At the time of the survey, of those students who reported earnings, the salaries ranged from $2.33 to $3.45, with a difference of $1.12 between the high and low. Health Occupations continued the previously reported pattern in that they had the lowest salary at this time; however Industrial had the highest salary with Agriculture next to the highest.

Area Vocational Schools. Area Vocational School graduates did not have as large a difference between the high and low wages. Initially the difference was $.60 with Agriculture high at $2.75 and Health low at $2.15. At six months the difference was $ .47 with Industry high at $2.83 and Health low at $2.36. The present earnings showed a difference of $ .84 with Business low at $2.40 and Industry high with $ 3.24.

Earnings & Job Relatedness

Comprehensive High School. Initial earnings did not show significant differences (0.05 level) between job relatedness and mean salary level. Mean initial salaries for comprehensive high school graduates clustered in the $2.00 to $2.50 range.

Table 11. Mean Initial Salary Levels by Job Relatedness of Initial Employment for Comprehensive High School Graduates by Vocational Program Area

Program Area	In	Related	Non-Related	F-Ratio
Agriculture	2.72	3.42	2.86	0.788
Distributive	2.30	2.14	2.54	2.341
Home Economics	2.34	1.00	2.48	1.662
Health	2.25	2.00	2.00	0.556
Business	2.20	2.15	2.24	0.272
Industrial	2.58	2.86	2.76	0.626
Other	2.37	2.37	2.57	2.541

Analysis of six months earnings by job relatedness for comprehensive high school graduates revealed that mean salaries ranged from $2.00 to $3.53 for graduates working in the area for which they were trained while mean salaries for graduates working in non-related areas ranged from $2.00 to $3.19. However, significant differences were identified in two areas. Distributive Ed graduates employed in the area for which they were trained received a mean salary significantly lower (.005) than those Distributive Ed graduates employed in non-related areas.

When graduates of all vocational programs were analyzed together the statistical analysis also showed that those who were employed in non-related jobs received significantly higher (.01) salaries than those employed in the field for which they were trained.

Table 12. Mean Salary Levels by Job Relatedness at Six Months Employment for Comprehensive High School Graduates by Vocational Program Area

Program Area	In	Related	Non-Related	F-Ratio
Agriculture	3.53	3.22	3.22	.193
Distributive	2.31	2.53	2.80	3.867*
Home Economics	2.34	2.00	2.80	.662
Health	2.20	2.00	2.00	.234
Business	2.36	2.45	2.36	.286
Industrial	3.02	3.35	3.19	.906
Total	2.59	2.74	2.88	3.636**

* Significant at .05
** Significant at .05

It is interesting to note that the mean salaries for Distributive Education graduates working in related areas are higher than those working in non-related areas. Of further interest is the fact that the mean salaries of those distributive education graduates working in their field and in related areas increased during their employment from six months to one year while the mean salaries for those employed in non-related areas dropped. Thus the significantly higher salary established by the distributive education graduates employed in non-related areas at six months was not maintained at one year.

Earnings of 1972 graduates by job relatedness one year after graduation showed no significant differences. Mean salaries for comprehensive high school graduates ranged from $2.00 for Home Economics graduates working in their field to $3.73 for Industry graduates working in a related area.

Table 13. Mean Salary Levels by Job Relatedness at One Year

Program Area	In	Related	Non-Related	F-Ratio
Agriculture	3.48	3.00	3.14	0.180
Distributive Ed	2.57	3.23	2.73	1.500
Home Economics	2.00	—— *	2.65	0.116
Health	3.00	—— **	3.00	—— *
Business	2.51	2.57	2.76	0.978
Trade	3.21	3.73	3.50	1.231
Total	2.81	3.05	3.02	1.151

* Not enough cases

** No cases

Area Vocational Schools. Mean salary levels for Area Vocational School graduates followed the same trends for all time periods. No significant differences were noted in the area vocational school data.

Summary

Employment Patterns

The percentages of graduates in each vocational program area seeking full-time employment clusters in the 50 to 80 percent range. The percentage of graduates in each vocational program seeking part-time employment ranged from 18 percent to 44 percent. A high percentage of vocational graduates in Indiana did seek employment.

For the graduates who did not seek full-time employment, 19 percent expected to enter another school. A similar response existed for the part-time employment category, or 14 percent, in that they reported they expected to enter another school. Other possible responses accounted for less than ten percent of the total response. Most of the vocational students had held one job. The average time required to move into the labor market was approximately two months.

Job Relatedness

Of the graduates who indicated initial employment, 35 to 70 percent reported they were working in an occupation at least somewhat related to their vocational training. For those reporting employment six months after graduation, the total percentages of graduates employed in a position related to their vocational training increased for each program area. Similarly, the percentages of relatedness increased regarding the employment at one year after graduation.

Vocational Training

A major proportion, from 75 to 87 percent, of the vocational graduates were satisfied with their training. The vocational graduates who reported that they had received additional job training after graduation ranged from 14 to 33 percent.

A high percentage of vocational students received their training in a cooperative program. From 20 to 47 percent of the students indicated they had held a part-time job while in high school.

Earning Patterns

The earnings of the graduates ranged from $2.14 per hour initially to a high of $3.45 per hour when present earnings were summed. All the areas except Agriculture and Home Economics revealed upward increases in earnings at both time periods. Agriculture and Home Economics earnings increased from initial to six months then decreased slightly at present. The area Vocational School graduates demonstrated a similar pattern with the exception of the Agriculture and Home Economics situation.

The initial earnings did not show significant differences between job relatedness and Mean Salary level. The Six Months earnings were significantly different for the Home Economics program area and significant difference when all program areas were analyzed. The analysis of the earnings one year after graduation did not reveal any significant differences. The relationship between job relatedness and earnings were not found to be significant at any time period.

Conclusions

The results of this research level to support the following conclusions:

1. The Vocational graduates and the Area School graduates did seek employment. The largest percentage of those who did not seek employment reported that they expected to enter another school.

2. A large number of Comprehensive High School graduates had held only one full-time job. The Area School graduates followed a similar pattern. Basically, the employment history of these graduates was stable.

3. The graduates moved into the labor market in 1-3 months. This was true of the Comprehensive and Area School graduates.

4. The Comprehensive High School graduates were employed in occupations related to their vocational training. The Area School graduates followed a different pattern as larger percentages of graduates were working in non-related jobs.

5. The study revealed that the longer the graduates were in the labor market the less the percentage who were employed in a related occupation. This was true of the total area of the total population and the individual program areas.

6. In all training areas the majority of the graduates were satisfied with their vocational training. This held true for Comprehensive and Area Schools.

7. The Comprehensive High School graduates did receive additional vocational training. The percentages clustered in the 15-30 percent range depending on program area. A similar pattern existed for Area School graduates, however, their cluster was a lower range from 0-22 percent.

8. Over 50 percent of the Comprehensive High School graduates were cooperatively trained. Smaller percentages of the Area School graduates were cooperatively trained.

9. A similar pattern existed in reference to part-time jobs. From 20-47 percent of Comprehensive High School graduates held part-time jobs, and 25-67 percent of the Area School graduates held part-time jobs.

10. The earnings patterns of the Comprehensive High School Vocational graduates and the Area School graduates were similar. The range was from 2.15 to 3.50 depending on program area and time intervals.

11. Earnings compared with job relatedness did not support the premise that graduates who worked in an occupation related to their vocational training would earn more than a graduate working in a non-related occupation. There were few exceptions to this general conclusion.

Recommendations

Based on the conclusions of this research the following recommendations are made:

1. Research of a comparative nature is needed on non-vocational graduates so that true benefits to vocational training can be analyzed.

2. Certain variables in this research should be examined in greater depth than possible in a mailed questionnaire. For example, job relatedness and job satisfaction should be examined to determine the degree of relationships that actually exist.

3. Further research needs to be completed to compare the employment patterns and satisfaction with training between the graduates of Comprehensive High Schools and Area Vocational Schools. This study points to some interesting comparisons.

4. Time series data is needed to determine the benefits of vocational education. This study pointed to some relationships that were developing in the short employment history examined. Further research is needed over longer histories to examine those possible relationships further.

REFERENCES

1. Burkett, Lowell A. "Access to a Future," Contemporary Concepts in Vocational Education, First Yearbook of the American Vocational Association. 1971, pp. 34-41

2. Tomlinson, Robert M. "Implications and Reflections: The Vocational Education Amendments of 1968," Contemporary Concepts in Vocational Education, First Yearbook of the American Vocational Association. 1971, pp. 26-34

APPENDIX A

LIST OF COOPERATING SCHOOLS

COMPREHENSIVE HIGH SCHOOLS

Laporte High School
Lowell Senior High School
Plymouth High School
Washington High School
Francis Joseph Reitz High School
Isacc C. Elston High School
Benton Central Jr/Sr. High School
Thomas Carr Howe High School
Jefferson Senior High School
Prairie Heights Jr/Sr. High School
Goshen High School
Columbus North High School
John Adams High School
Princeton Community High School
Tipton High School
Anderson High School
Crispus Attucks High School
LaSalle High School
Hammond Technical Vocational High School
Indiana State Lab School
Plainfield Jr/Sr. High School
Franklin Central High School
Crothersville High School
Kokomo High School
Noblesville High School

AREA VOCATIONAL SCHOOLS

El-TIP-WA Area Vocational School
Muncie Area Career Center
Elkart Area Career Center
North Lawrence A/V Tech. Center
Southeastern Area Vocational School

APPENDIX B

LETTERS AND RESEARCH INSTRUMENT

PURDUE UNIVERSITY
AGRICULTURAL EDUCATION
BUILDING G, SCC
WEST LAFAYETTE, INDIANA 47907

Henry N. Cox
President of Indiana Public Schools Superintendents Association
14 South Jefferson Street
Danville, Indiana 46122

To: Superintendents, Indiana Secondary High Schools
From: Henry N. Cox
Subject: Research Proposal
Date:

Dr. Bill Richardson, Dr. Joan McFadden, and graduate students Phyllis Tombaugh and Jerry Peters of Purdue University, in cooperation with the Indiana State Department of Public Instruction, are conducting a research project entitled: An Identification of Employment Patterns of Vocational Graduates of Indiana Secondary Schools. The researchers have asked for our assistance with a portion of the study related to Indiana Secondary Schools.

After reading a summary of the proposal it appears to me that the data to be gathered will be of significant benefit to Indiana Secondary Schools in future program planning. It will take some time to provide the necessary information but the value of the study should make the time well spent.

Your assistance with the project will be appreciated.

Henry N. Cox
President of IPSSA

PURDUE UNIVERSITY
AGRICULTURAL EDUCATION
BUILDING G, SCC
WEST LAFAYETTE, INDIANA 47907

Dear :

The State Department of Public Instruction in cooperation with Purdue University is conducting a study entitled: An Identification of Employment Patterns of Vocational Graduates of Indiana Secondary Schools. This study is directed by two members of the Vocational Education Section at Purdue, Dr. Bill Richardson and Dr. Joan McFadden. The information received from this study will be helpful to the state and to the schools involved in the study.

The study has been reviewed and endorsed by Henry N. Cox, Superintendent of Schools at Danville and President of the Indiana Public Schools Superintendents Association. His endorsement of the project is expressed in the enclosed letter.

Enclosed is a brief summary of the study. We would appreciate a few minutes of your time in reading and reviewing this summary. After you have had a chance to read the summary, we will contact you to see if you have any questions about the study and when we might set up an appointment to discuss the project further. This study is not a doctoral dissertation.

Thirty Indiana High Schools were randomly selected for study. The following school in your district was selected:

We hope you will consider participating in this study.

Sincerely,

Jerry Peters
Graduate Assistant
Agricultural Education Section

JP/jh

Enclosure

PURDUE UNIVERSITY
AGRICULTURAL EDUCATION
BUILDING G, SCC
WEST LAFAYETTE, INDIANA 47907

YOUR HELP IS NEEDED!

A study is being conducted by the State Department of Public Instruction for Indiana in cooperation with Purdue University. The purpose of the study is to follow-up 1972 and 1973 graduates. Your school officials have reviewed and approved this project and urge you to participate.

Enclosed you will find a questionnaire. Some of the questions may seem quite personal, but the information is needed for the study. You can be assured that all the answers will be kept confidential. Only summaries of groups will be reported. Please fill out the questionnaire and send it back in the enclosed self-addressed envelope by

Read the questionnaire carefully so your answers will be complete and accurate. It will take approximately 15 minutes of your time. Then return the questionnaire in the stamped envelope immediately so that your school will be represented in this important study.

Thank you for your cooperation, and good luck with your future plans.

Sincerely,

Jerry Peters
Graduate Assistant
Agricultural Education Section

JP/jh

Enclosure

FOLLOW-UP SURVEY OF FORMER VOCATIONAL STUDENTS

Your cooperation in completing this survey is greatly appreciated. Please answer each question as accurately and completely as possible. The questions on this form refer to your high school vocational classes which show that you took _____ _____ ___ _____.

1. Since you left this vocational program, did you seek full-time employment?

___ Yes ___ No

2. If you did not seek full-time employment when you left this vocational program, indicate the reason.

Check only one line
___ Expected to enter another school
___ Housewife or about to be married
___ Physical or other handicap
___ Not interested in a job
___ Expected to enter the military service
___ Only wanted to work part-time (less than 30 hours per week)
___ Other (specify) _____
_____

3. Did you seek part-time employment (less than 30 hours per week) when you left this vocational program?

___ Yes ___ No

4. If you sought part-time employment instead of full-time employment, when you left this vocational program, indicate the reason.

4. Continued

Check only one line
___ Expected to enter another school
___ Housewife or about to be married
___ Physical or other handicap
___ Not interested in a full-time job
___ Expected to enter the military service
___ Unable to find a full-time job
___ Other (specify) _____
_____

5. How many full-time jobs (30 or more hours per week) have you held since you left this vocational program?

___ None
___ 1 full-time job
___ 2 full-time jobs
___ 3 to 5 full-time jobs
___ 6 or more full-time jobs

NOTE: IF YOUR ANSWER TO QUESTION 5 WAS NONE, SKIP TO QUESTION 23.

6. How many months after graduating was it before you took your first full-time job?

___ 0-2 ___ 6-8 ___ 12 or over
___ 3-5 ___ 9-11

7. Briefly describe your first full-time job when you left this vocational program: _____

_____

8. How closely did your first full-time job (30 or more hours per week) after leaving this vocational program relate to the training you received?

Check only one line
___ I was employed in the occupation for which I was trained by this vocational program
___ I was employed in a related occupation
___ I was employed in a completely different occupation

9. Did this vocational training program adequately prepare you for your first full-time job?

___ Yes ___ No

10. Do you have another skill that you use for a part-time job besides the full-time job?

___ Yes ___ No

11. What were your beginning wages on your first full-time job after leaving this vocational program?

Check or provide information needed
___ $1.50 to $2.49 per hour
___ $2.50 to $3.49 per hour
___ $3.50 to $4.49 per hour
___ More than $4.50 per hour

If you were paid <u>other</u> than on an hourly basis, estimate your gross earnings in one of the categories below:

Monthly:___ Weekly:___ Other:___

NOTE: IF YOU WERE NOT EMPLOYED THE FIRST SIX MONTHS AFTER GRADUATION, SKIP TO QUESTION 15.

12. Briefly describe your job six months after you left this vocational program:

_____

_____

Did this job require you to join a union? ___ Yes ___ No

13. How closely did your job, six months after leaving the vocational program, relate to the training you received?

Check only one line
___ I was employed in the occupation for which I was trained by this vocational program
___ I was employed in a related occupation
___ I was employed in a completely different occupation

14. What were your wages on your job six months after leaving this vocational training?

Check or provide information needed
___ $1.50 to $2.49 per hour
___ $2.50 to $3.49 per hour
___ $3.50 to $4.49 per hour
___ More than $4.50 per hour

If you were paid <u>other</u> than on an hourly basis, estimate your gross earnings in one of the categories below:

Monthly:___ Weekly:___ Other:___

NOTE: IF YOU ARE A 1973 GRADUATE, SKIP TO QUESTION 18 AND CONTINUE

15. Briefly describe your job one year after you left this vocational program:

_____

_____

Did this job require you to join a union? ___ Yes ___ No

16. How closely did your first full-time job (30 or more hours per week) one year after leaving this vocational program relate to the training you received?

Check only one line

___ I was employed in the occupation for which I was trained by this vocational program

___ I was employed in a related occupation

___ I was employed in a completely different occupation

17. Did this vocational training program adequately prepare you for your first full-time job one year after leaving this training?

___ Yes ___ No

18. Indicate below the size of the city in which you are employed:

___ 0-1,000	___ 10,000-25,000
___ 1,000-2,499	___ 25,000-50,000
___ 2,500-4,999	___ 50,000-100,000
___ 5,000-10,000	___ Over 100,000

19. If you are presently working, briefly describe your job: _____

_____

_____

Does this job require you to join a union? ___ Yes ___ No

20. What wages are you presently earning?

Check or provide information needed

___ $1.50 to $2.49 per hour

___ $2.50 to $3.49 per hour

___ $3.50 to $4.49 per hour

___ More than $4.50 per hour

If you are paid <u>other</u> than on an hourly basis, estimate your gross earnings in one of the categories below:

Monthly:___ Weekly:___ Other:___

21. How many people are employed at your present place of employment?

___ 0-5	___ 16-20
___ 6-10	___ 25-50
___ 11-15	___ (If over 50, give estimated number)

22. Is your present job located over 10 miles from the high school where you received your vocational training?

___ Yes ___ No

If <u>YES</u>, check one of the lines below

___ 10-20 miles

___ 20-30 miles

___ 30-40 miles

___ 40-50 miles

___ If over 50 miles, give est. milage

23. Were you employed in a co-op job while in high school?

___ Yes ___ No

If <u>YES</u>, please describe the job you held: _____

_____

24. Did you have a part-time job while in high school other than your co-op job?

___ Yes ___ No

25. Were you satisfied with the vocational training you received in the program in which you were trained?

___ Yes ___ No

26. Since graduating from high school, have you been enrolled in a vocational program or other job related training program?

___ Yes ___ No
If YES, please specify: _____

_____

27. Do you have any physical handicaps or health conditions that keep you from taking certain jobs in the vocational area in which you were trained?

___ Yes ___ No

28. Which of the following best describe your feelings about your likes of your present job?

___ Highly like
___ Only moderately like
___ Indifferent
___ Only moderately dislike
___ Highly dislike

29. Briefly describe the occupation of the head of your home while you were in high school: _____

_____

_____

30. Are you:

___ Single ___ Divorced or Separated
___ Married ___ Widowed

31. Are your parents and/or guardians employed?

Please check the lines that are appropriate:

	Father	Mother	Guardian
Full-time (30 hours or more per week)	_____	_____	_____
Part-time (less than 30 hours per week)	_____	_____	_____
Not employed	_____	_____	_____

32. Circle the number of years of schooling completed by your father, mother and/or guardian.

Parent or Guardian	Years of Schooling Completed			
	Grade School	High School	College	Grad. School
Father	5 6 7 8	9 10 11 12	13 14 15 16	17+
Mother	5 6 7 8	9 10 11 12	13 14 15 16	17+
Guardian	5 6 7 8	9 10 11 12	13 14 15 16	17+

APPENDIX C

LIST OF ADVISORY COMMITTEE

and

PROJECT CONSULTANT

EVALUATION COMMITTEE

Mr. Rod McKinney
Vocational Director for Benton Community School Corporation
Box 512
Fowler, Indiana 47944

Mr. V. A. Simmons
Superintendent of Benton Community School Corporation
Box 512
Fowler, Indiana 47944

Mr. Orville Scribner
Systems Analyst for Indiana Public Instruction
State Department of Public Instruction
Division of Vocational Education
225 State House
Indianapolis, Indiana 46204

Dr. Robert Kane
Professor
Math Education
South Campus Courts

Dr. Betty Sawyers
Assistant Professor
Home Economics Education
South Campus Courts

CONSULTANT

Dr. Donald Osburn
Professor
Department of Agricultural Economics
University of Missouri
Columbia, Missouri

APPENDIX D

ANALYSIS OF NON-RESPONDENTS

Analysis of Non-Respondents

The sample in this study consists of 680 cases, or a 68 percent usable return rate. A five percent random sample was taken from the non-respondents. A comparison of the respondents and non-respondents was made on each variable studied. The small "n" for the non-respondents made it difficult to do a rigorous statistical analysis. However, percentages and averages are reported for each variable so that the reader can determine the degree of similarity and difference that exists between the respondents and the non-respondents. (See Table 14)

Table 14. Comparison of Respondents and 5% Random Sample of Non-Respondents

Variables	Respondents (N=680)	Non-Respondents (N=17)
Socio-Economic Variables		
Males	45%	53%
Females	55%	47%
Father's Educational Level	10.4 Yrs.	10.6 Yrs.
Mother's Educational Level	10.7 Yrs.	11.0 Yrs.
Married	20%	29%
Not Married	69%	59%
Father's Employment		
Employed Full-Time	85%	82%
Mother's Employment		
Employed Full-Time	41%	47%
Physical Handicaps	2%	0%
Vocational Program		
Agriculture	7%	6%
Business Education	36%	23%
Distributive Education	19%	12%
Health Occupations	2%	6%
Home Economics	4%	6%
Trade and Industrial	30%	47%
High School Co-Op Program	49%	35%
Part-Time Job	33%	29%
Additional Training	21%	12%
Satisfied with Vocational Training	81%	76%

Table 14 illustrates that there were some differences between the two groups. The magnitude of the differences is, of course, one of interpretation. The respondents sample consists of 45 percent males and 55 percent females, while the non-respondents were 53 percent males and 47 percent females. Clearly, the non-respondents sample has a larger proportion of males than the respondents sample. The father's educational level was virtually the same.

The employment levels of the father and mother were basically the same for both groups. Eighty-five percent of the respondents' fathers were employed and 82 percent of the non-respondents' fathers. However, a little larger proportion of the non-respondents' mothers were employed when compared to the employment of the respondents' mothers.

Two percent of the total sample were physically handicapped, but none of the five percent random sample respondents were.

The five percent random sample of non-respondents contained a much smaller proportion of students who were employed in co-op programs while in school. Also, a smaller percentage held part-time jobs. In like manner, the non-respondents sought less additional training.

The responses relative to satisfaction with vocational training were quite similar. Eighty-one percent of the respondents said they were satisfied, and 76 percent of the non-respondents said they were satisfied.

The year of graduation of the non-respondents was, as one might expect, a larger percentage of 1972 graduates.

When asked whether they sought full-time employment or not, both respondents' and non-respondents' answers were virtually the same, as seventy-six percent of the non-respondents and 74 percent of the respondents reported that they sought full-time employment. The respondents and non-respondents reported similar responses relative to the number of full-time jobs held. Forty-seven percent of the respondents had held only one full-time job compared to 35 percent for the non-respondents. A larger proportion of the non-respondents had held two or more jobs.

The responses to whether Vocational Education adequately prepared them for their first job reveal that 45 percent of the respondents and 41 percent of the non-respondents answered positively. The respondents reported an average earnings of $1.95 per hour and the non-respondents $2.05 per hour for their initial job.

The summary of their wages at six months yields an interesting difference. The respondents reported that their earnings had actually dropped at six months, where as the non-respondents reported an increase to $2.33 per hour.

A higher proportion of the respondents said they highly liked their present job. However, a higher proportion of the non-respondents said they moderately liked their present job. Sixty-one percent of the respondents said they either highly liked or moderately liked their jobs and 71 percent of the non-respondents responded thusly.

It appeared that the non-respondents worked in larger businesses than the respondents. A large percentage of people of the non-respondents were members of labor unions, which could be expected due to the fact that they worked in

Table 14 (cont.) Comparison of Respondents and 5% Random Sample of Non-Respondents

Variable	Respondents (N=680)	Non-Respondents (N=17)
Year of Graduation		
1972	49%	59%
1973	51%	41%
Sought Full-Time Employment	74%	76%
Number Full-Time Jobs		
0	18%	23%
1	47%	35%
2	23%	29%
3-5	8%	12%
Months Before Sought Full-Time Employment	.82 Months	2.01 Months
Job Relatedness of 1st Job		
High	27.5%	24%
Moderate	19%	35%
Low	32%	41%
Voc. Edu. Adq. Prepare	45%	41%
Beginning Wages	1.95	2.05
Job Relatedness 6 Months		
High	22%	24%
Moderate	16%	12%
Low	26%	41%
Wages at Six Months	1.66	2.33
Like Present Job		
High Like	39%	24%
Moderately Like	22%	47%
Indifferent	9%	6%
Dislike Present Job		
Size of City Where Employed	33,674	37,970
No. People Employed Place Work	69	185
Labor Union	15%	35%
Migration	14.7 Miles	4 Miles

larger businesses, and their earnings were somewhat higher. The distance from where they were trained to where they were employed posed an interesting difference. The respondents were approximately 15 miles from where they were trained. However, the non-respondents were only 4 miles.

In summary, when one looks over the respondents and non-respondents it is quite clear that there are differences and similarities in the two groups. The question poses itself that if there are differences, to what extent will these differences detract from the report dealing with the respondents. The investigator contends that there are not enough major differences to destroy the validity of the report as presented in previous pages.